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LECTURES.

CLINIC OF PROF. AUSTIN FLINT, SR.: BELLEVUE HOSPITAL, NEW YORK.

[REPORTED FOR THE BOSTON MEDICAL AND SURGICAL JOURNAL.]

Probable Ulcer of the Stomach. — GENTLEMEN: This patient's name is Ellen B., and she is thirty-two years of age. She was admitted to the hospital ten days ago, and gives the following account of herself: Eight years ago she had intermittent fever, and six years ago an attack of hæmatemesis which would seem to have taken the place of her regular menstrual flow. In the month of June, 1877, she "felt something give way," as she expresses it, in the lumbar region, and since then she has suffered considerably from pain in the back, anorexia, palpitation of the heart, and debility. She says that she has also vomited blood several times of late.

When she came to the hospital she complained principally of pain and insomnia. Since her admission she has vomited frequently, and twice has brought up blood from the stomach. The first time was just a week ago to-day, and the second time a day or two afterward. On both occasions the blood was mixed with froth and food. After this she was fed by means of nutritive enemata, and both the vomiting and the pain ceased. More recently she has been again taking food by the mouth, and since this has been resumed it is noticed that she vomits occasionally, though there is no blood in what she brings up. She is seen to be anæmic, but not much emaciated, and she now complains once more of very severe pain in the lumbar region. She is taking milk, lime-water, and brandy, and in the way of medicine twenty grains of quinine three times a day, with enough morphia to control the pain. The morphia is usually given hypodermically.

The question that presents itself after a review of the symptoms of this case is, Has the patient gastric ulcer? and I must confess that I am hardly prepared at present to give a positive opinion in regard to it. In a case of this character, where we can exclude cirrhosis of the liver, we certainly ought to suspect ulcer of the stomach. If the patient were older we should look for carcinoma, though it is rare for the hæmorrhage to be as free in that affection as it has been here. Then if there were cancer of the stomach we should in all probability be able to distinguish a tumor, which is not the case here. The symptoms of well-marked gastric ulcer, however, are not present. Were this the case the vomiting would be regular, and it would be found that food would generally be retained for a certain length of time by the stomach before it would be thrown off. Then the pain could be localized in a circumscribed spot somewhere over the stomach. Here it is singular that there is scarcely any pain whatever about the stomach. Still I cannot but regard it probable that there is a gastric ulcer here, and, at all events, we shall base our treatment on that supposition. The great indication is to keep the stomach for a time completely at rest, and this can be properly done only by maintaining the nutrition by means of rectal alimentation. Just at present the patient does not vomit at all, but if there is any return of the symptom feeding by the mouth will be withheld, and the nutritive enemata resumed. It seems to me that gastric ulcer will be much more amenable to treatment as soon as the method of rectal alimentation is more universally employed in such cases. This permits the affected organ to remain completely at rest, and thus a cure is usually quite promptly obtained. Within the last year very satisfactory results have been reported in a considerable number of cases treated in this manner.

Cancer of the Pylorus; Remarkable Relief from Distressing Symptoms afforded by Codeia. — This case, you will perhaps remember, was first presented to the class a fortnight ago to-day, when the patient had just been admitted to the hospital. The history which he gave pointed strongly to carcinoma of the stomach, and when we came to make a physical examination, all doubt about the case was cleared up. He was given directions as to the regulation of his diet, and temporarily discharged with instructions to report himself in one week; the only medicine that was ordered for him in the mean while being codeia, in one-grain doses.

At the end of the week he came back, and stated that he felt a great deal better in every respect, and to-day he returns again to tell us of still further improvement. Indeed, so marked has been the relief from the symptoms which before occasioned him so much suffering that the man thinks he is almost well; and this improvement in his condition has affected his imagination to such an extent that he really believes the tumor at the pylorus has begun to diminish in size, — a point in which I can hardly agree with him. This is a case in which there can be no possible doubt about the diagnosis of carcinoma, and yet so beneficial has been the palliative effect of the opiate that the patient, after taking it but two weeks, believes he is recovering in spite of what the doctors tell him. It only illustrates how useful an agent opium really is in these cases when it is well borne. In the present instance the obstruction at the pyloric orifice is not sufficient to occasion vomiting simply by cutting off the exit from the stomach, but still there was previously a good deal of emesis. Now this has ceased entirely, the man not having vomited once since he has been taking the codeia, and in addition he has been able to digest his food a great deal better, while the pain from which he suffered has to a great extent disappeared.

Sneaking Pneumonia. — The next patient is the subject of what I am in the habit of calling "sneaking pneumonia." This term, for which I am responsible, is not perhaps a very elegant one, but it at all events has a certain significance, and I notice that some of the ablest authorities in Germany have adopted an equivalent expression. The man's name is Hugh O'Brien; he is forty-five years old, and says he had syphilis about fifteen years ago. A corroboration of the fact of his having had syphilis is furnished by the peculiar voice of the patient, and the signs of cicatrization about the throat. There has been no phthisis in his family. Two weeks before his admission he had a horse fall on him, causing considerable compression of the chest. He complains of weakness, but says that he has no pain at present. The change in his voice, which is not really hoarseness, seems to be due to the condition of the palate and posterior nares, some operation having been performed about his throat on account of the syphilitic trouble referred to.

On making a physical exploration we find the signs of a localized pneumonia a little below the level of the left nipple, such as bronchial respiration, bronchophony, and dullness on percussion; but it seems to be quite circumscribed in extent. There is no evidence of ordinary phthisis (the consolidation not being in the right part of the lung for that), and the voice is by no means that of laryngeal phthisis. Now, according to the views of many of the best observers of the day, acute lobar pneumonia is not simply a local affection; and the present case would seem to lend strength to this theory, because although the patien thas pneumonic consolidation at one point he has not at all the symptoms of ordinary pneumonia. The latter, according to the modern views, is to be regarded really as a constitutional disease, the trouble in the lung being merely its local manifestation. Here, on the other hand, the patient has no fever or any other evidence of constitutional disturbance.

MICROSCOPIC ORGANISMS IN COCHITUATE WATER.

BY ROBERT WHITE, JR., M. D.

THE statement is often made by a certain class of writers and lecturers that every drop of our drinking water teems with living forms in great and horrible variety; and a favorite illustration of a popular scientific lecture is the exhibition on a screen, by the aid of a camera and the oxyhydrogen light, of "a drop of water magnified," the resulting display being suggestive of a prehistoric ocean, in which extinct saurians are disporting themselves; for the objects displayed under these circumstances, as a rule, have no affinity with any forms of life known to exist at present on the earth, in the air, or the waters under the earth. The "drop of water" is generally a considerable quantity of that liquid which has been artificially supplied with its lively inhabitants from other sources, and these are so distorted by the unnatural optical conditions under which they are displayed as to be unrecognizable even to those familiar with their true forms.

The facility with which grossly exaggerated statements and exhibitions like the above are accepted, and the deep interest naturally attached to all the characteristics of so important an element of our daily life, render it desirable that the results of an extended series of observations on the microscopic organic elements of our water supply should be concisely presented. That the observations made may be verified or corrected by others, I will state the modes of procedure adopted. The examination of water taken by drops directly from the hydrant gives but slight and incorrect indications of its true characteristics, unless it be exceptionally turbid and impure. On all waters as pure as our Cochituate, or the Croton of New York, satisfactory observations can be made only by concentrating the suspended matters by filtration

EXPLANATION OF PLATE.

Protozoa: 1, Actinophrys; 2, Difflugia.

Infusorians: 3, Paramœcium; 4, Vorticelli; 5, A Flagellate Monad; 6, Peridinium, 400.

Rotifers: 7, Anurea Heptodon; 8, Monostyla Quadridentata.

Crustaceans: Entomostraca: 9, Tail of Cyclops; 10, Chetochilus; 11, Antenna; 12, Leg or Wing of Daphnia; 13, Cyclops Quadricornis; 14, Daphnia Pulex; 15, Branchipus Stagnalis, 100.

16, Spicules of Fresh-Water Sponge.

17, Bacteria.

18, Vibriones.

19, A, Progressive Segmentation of Coccochloris; D, Conjugation of C by union and fusion of two cells; B, C, Segmentation of Protococcus.

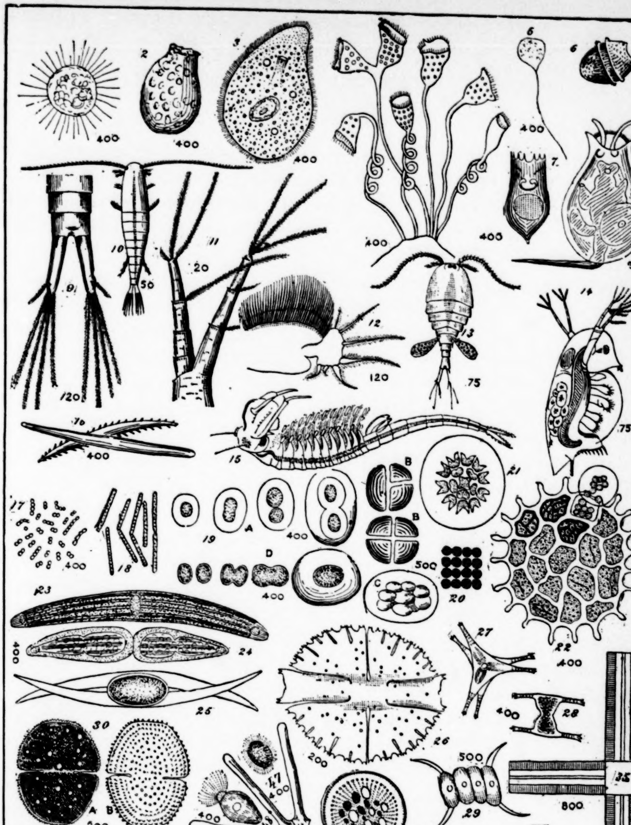
20, Merispomedia.

Desmids: 21, Pediastrum in process of formation; 22, Pediastrum complete and forming new cells; 23, Closterium; 24, Binary Subdivision in do.; 25, Conjugation of do.; 26, Micrasterias; 27, 28, Staurastrum, Gracile, front and side view; 29, Scenedesmus; 30, Cosmarium, A, Complete Frond, B, Empty Frond; 31, Sphærozosma.

Diatoms: 32, Asterionella; 33, 34, Stephanodiscus, front and side views; 35, Diatoma ——; 36, Tabellaria; 37, Meridion Circulare; 38, Navicula; 39, Surrirella; 40, Fragillaria; 41, Amphora Ovalis; 42, Diatoma Vulgaris; 43, Pinnularia; 44, Synedra; 45, Pleurosigma; 46, Melosira.

47, 48, Motile Spores.

The larger numbers indicate the number of diameters to which the objects have been magnified. The plate has been reproduced by the photo-electrotype process from the pen-and-ink drawings.



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or deposition of a sediment. (1.) A mode of examination often adopted is the suspension in a wire loop of a small glass disk at the bottom of a tall glass vessel holding about a litre, which has previously been filled with the water to be examined; after standing carefully covered for one or two days the liquid is withdrawn by a siphon nearly down to the disk, which is then carefully removed, the under side dried on blotting-paper, a cover glass applied, and transferred to the stage of the microscope. In very impure waters the deposit on the disk will fairly represent the matters suspended in the liquid; but in waters as pure as those alluded to above, the deposit obtained in this way is very slight and unsatisfactory.

Either of the following methods will give much larger amounts of material: (2.) Procure a glass jar holding about a gallon, and as tall as possible; a "specie" jar, or even a pitcher, if nothing better can be had, will answer. Fill with the water to be examined, cover carefully, and place where it will be free from disturbance; at the end of twelve hours siphon off all but the last pint, refill with fresh water from the same source, and repeat this every twelve hours for eight or ten days; at the end of that time there will be a pint of pretty thick sediment, which should be transferred to a tall, narrow glass, allowed to stand for twenty-four hours, the supernatant liquid removed, and the sediment poured into a vial or test-tube, from which a minute quantity may easily be removed with a pipette to the object slide. (3.) Make a conical bag of well-worn cotton cloth washed free from loose fibres, eight or ten inches in length, and open at both ends; secure the smaller end around the neck of a one-ounce, wide-mouthed vial by tying with cord, or by a rubber band, and the other end to the hydrant faucet; let the water run into this fast enough to distend the cloth cylinder without overflowing at the ends. The water will pass out through the meshes of the cloth, leaving all its suspended matters on the inner surface or in the vial below. After twelve or twenty-four hours remove the vial and cloth, cut the latter open on a plate, and with a large camel's-hair pencil gently brush its inner surface, and add the results to the contents of the vial; allow it to settle for a few hours, and the sediment is ready for removal and examination.

Both the animal and vegetable kingdoms have numerous representatives in nearly all drinking waters, those belonging to the latter being greatly in excess, although many of the organisms now assigned to the vegetable kingdom formed a sort of border ground, over which naturalists fought for many years; and even at present there is much dispute as to the animal or vegetable character of many of the lower forms of life, for numbers of them possess so many features in common that it is impossible to draw a sharp line of demarcation between the characteristics of the two kingdoms.

As evidence of the difficulty of clearly classifying the lower forms, the Amœbæ will furnish a good illustration. Until a recent period these little masses of free motile protoplasm were supposed to represent the simplest forms of distinct animal life ; but later observations have shown that small masses of sarcode are developed by metamorphosis of the endochrome of certain vegetable cells in *Volvox Globator* and the roots of certain mosses which have in all respects the same appearances and motile properties that are possessed by the amœboid bodies in question.

Whatever animal forms may exist at the sources from which water is supplied, as it comes to us in cities, only the lower ones can be recognized, and only those which breathe without a separate respiratory system are found living; those forms of the invertebrata that breathe through a tracheal system of vessels being unable to withstand the high hydrostatic pressure to which the supply of most cities is subjected.

The lowest sub-kingdom of animals, the Protozoa, are jelly-like masses of protoplasm (sarcode), generally microscopic in size, with slight if any differentiation of organs or parts, and no nervous system. In the Cochituate we find the sub-class of the Rhizopoda represented by two or three species of Amœbæ, which it is difficult to classify distinctly, and indeed, in the light of recent observations, it is impossible to say positively that these are not vegetable rather than animal matter.

The class of the Infusoria are named from their almost invariable presence in stagnant water containing organic matter in solution ; but the *habitat* of a few species is by preference fresh and pure waters. They differ from the other Protozoa by the development of a rudimentary mouth and digestive cavity. They do not possess the power of the Amœbæ to extend pseudopodia, but are furnished with cilia or terminal filaments, which give them active motile powers, and furnish the nomenclature of the orders found in the Cochituate, the Ciliata and Flagellata. The first-named order is represented by the species Paramecium (Figure 3), Vorticelli (Figure 4), and the closely allied Epistylis. The Paramecium are sarcode masses inclosed in a transparent homogeneous membrane, with rudimentary mouth and stomach, and numerous vacuoles long considered to be stomachs, but which probably form an imperfect vascular system. This species is a fair type of the general structure of the Infusoria. The inclosing membrane is studded over a part or the whole of the surface with cilia, which are in such rapid motion during life that they are seen with difficulty ; it is only as the animalcule dies and their motion becomes slower that the vortices created by their movement make them apparent. The Vorticelli, to which the Epistylis is closely allied, is a beautiful flower-like Infusorian, growing plentifully in fresh water, usually attached to the stems of aquatic plants ; the pedicle supporting the calyx-like body contains spiral contractile fibres that give it a power of lengthening and shortening itself. Of the Flagellata there are two or three species present in the Cochituate, the Peridinium (Figure 6) being most numerous, and of most interest as representatives of the species of animalcules to which the phosphorescence of the sea is due. This species, with their kindred that are found in the Cochituate, but rarely exist in decomposing or stagnant waters.

Although most of the organisms belonging to the Protozoa are little more than undifferentiated masses of protoplasm, single cells in fact, it must not be forgotten that even the lowest forms possess all the fundamental vital properties of the higher animals; and indeed the Amœbæ, the lowest type of all, possess and exhibit in a marked degree those processes of motion, secretion, respiration, and reproduction that are commonly associated only with the life of higher organisms. Each amœboid cell is in fact a complete individual, capable of developing itself to the full perfection of its species, of maintaining itself till its natural period of existence has ended, and of completing the cycle of its life by reproducing itself in one or more similar individuals, with the same vital properties.

The Rotifera, the next higher class of animals represented in the Cochituate, on casual inspection seem to possess many features in common with the Infusoria; but closer examination shows that their structure is of a much higher type, being differentiated into a well-marked body cavity, a complete alimentary canal, and well-developed nervous system. The presence of a disk surrounded with cilia in rapid motion on the head of most species gives them the name of wheel animalcules. They multiply with such extraordinary rapidity that it can hardly be expressed in figures, and resist indefinitely the destructive influences of processes usually fatal to animal life; specimens that had been desiccated at a temperature of 200° F., and subjected to the influences of sulphuric acid and chloride of calcium in a vacuum for thirty days, reviving quickly on being moistened. These two properties explain their almost universal presence in fresh water; they are not usually found in stagnant water or in company with organisms whose presence is indicative of putrefaction. The elegance of their outlines, the translucency of their complex structure, and the apparent intelligence of their graceful and vigorous movements place them among the most interesting and instructive objects of microscopic study. Their representatives in the Cochituate are the Monostyla Quadridentata (Figure 8) and Anurea Heptodon (Figure 7), the latter in considerable number.

The animal forms next to be considered belong to the class of the Crustacea, or shell-coated animals, which includes those edible favorites the lobster and crab. The order of the Entomostraca, or shelled insects, furnishes the greatest proportion of the larger animal forms present in the Cochituate. They are usually large enough to be seen with the naked eye when the water containing them is held up to the light, and they exist in great numbers in most collections of fresh water. Their bodies are covered with a carapace or shell, more or less jointed in the different species, and in some, as the Cyprides, the animal can completely protect itself from its enemies by withdrawing its limbs into the bivalve shell, which it can open or close at will. The genera of the Cyclops (Figure 13), Daphnia Pulex (Figure 14), and Chetochilus (Figure 10) are very numerous in the Cochituate and in all fresh-water ponds and lakes. These various genera present several points of interest in their life histories, of which the most important are that as a rule they are found only in good water, that they have the same endowment of molting their shells and spontaneously casting off limbs, antennæ, etc., so well known in their larger kindred the lobsters and crabs, and the power of reproducing them. On this account the presence of these rejected members, especially the tails of the Cyclops and limbs of the Daphnia, with numerous free antennæ, are to be found in nearly all water supplies (Figures 9, 11, 12). The Phyllopoda are represented generally in drinking water by the Branchipus Stagnalis (Figure 15), a Crustacean nearly allied to the familiar shrimp of our salt marshes.

(*To be concluded.*)

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

The Semicircular Canals. — In a paper read before the Paris Académie des Sciences on the 31st of December, 1877, Cyon[1] describes the semicircular canals as the peripheral organ of a new sense which he names "the sense of space;" that is, the impressions which are produced by irritation of the ultimate nerve fibres in the ampullæ of the canals give us the appreciation of the three dimensions of space, each one of the three canals corresponding with one of these dimensions. The eighth nerve he divides into two nerves of sense, — a nerve of hearing and a nerve of space. The irritation of the ultimate fibres of this organ of space he thinks occurs in a mechanical manner through the otoliths of the ampullæ, which are set in vibration by every active or passive movement of the head, and also perhaps by vibrations of air, the oscillations of which are transmitted to the labyrinthine fluid by means of the drum membrane and conducting apparatus of the middle ear.

This paper may be regarded as an elaboration of the results of the experiments of Fleurens and others, which have established the fact that the semicircular canals are intimately associated with the coördination of motion and with equilibrium of the body. The greater part of the paper is taken up by the relations of the semicircular canals to the innervation centres of the muscles of the eye, through which relations he explains the phenomena caused by irritation of the canals.

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[1] Archives générales de Médecine, February, 1878.

Vertigo. — In view of the discussions which have been going on during the last two or three years on vertigo originating from the labyrinth of the ear, recent papers by Woakes,[1] which are based on new neurological investigations, are of special interest. The anatomical data on which he bases his theories are worthy of careful consideration in studying further the phenomena of labyrinthine vertigo.

The labyrinth of the ear derives its arterial blood from an entirely different source from the tympanum. While the latter is supplied by branches of the carotid artery and discharges its veins into the internal jugular, the former — the labyrinth — is supplied entirely from the vertebral artery and discharges its veins into the superior petrosal sinus. The vertebral artery derives many of its vaso-motor nerves from the inferior cervical ganglion, and these nerves communicate by anastomosing fibres with the brachial plexus. This lower cervical ganglion furnishes the principal inhibitory nerve of the heart, namely, the inferior cardiac nerve, and thus this nerve is in close relation with the nerves which regulate the supply of blood to the labyrinth.

The brachial plexus is also closely related to the circulation of the labyrinth, for in addition to the nerve fibres connecting the plexus around the vertebral artery directly with the brachial nerves, branches pass from the lower cervical ganglion to the brachial nerves. Through this connection Woakes explains the fact which has been noticed by Weir Mitchell and others, that gun-shot injuries of the nerves of the upper extremities are followed by vertigo, a phenomenon which does not result from similar injuries of the nerves of the lower extremities. The vertigo from these injuries he would thus consider to be a labyrinthine vertigo, due to disordered circulation in the labyrinth through the vaso-motor nerves of the vertebral artery.

Still another connection of the inferior cervical ganglion is pointed out, which brings the stomach into relation with the labyrinthine circulation. A fasciculus is given off from the pneumogastric nerve near the recurrent laryngeal, which passes to the inferior cervical ganglion, and impressions thus proceeding to this ganglion may be transferred to the inhibitory nerves of the vertebral artery, and in this way influence the circulation of the labyrinth.

In fact, then, we have in the inferior cervical ganglion an organ connecting the upper extremities, heart, stomach, and upper portion of the digestive organs with the circulation of the labyrinth through the vaso-motor nerves which control this circulation. From any irritation we may have a wave of diminished inhibition which, relaxing the walls of the vertebral artery, produces an increased flow of blood to the labyrinth, thus causing pressure on the endolymph of that cavity. Such a pressure means, physiologically, dizziness. In the disturbance of one or more of these "sympathies" may be found the cause of simple labyrinthine vertigo without any previous ear disease.

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[1] Lancet, February 9, 1878. British Medical Journal, March, 1878. American Journal of the Medical Sciences, April, 1878.

The argument of Woakes, if accepted, would prove that the ganglia of the sympathetic system so connect or "correlate" distant regions that it is impossible for one of these regions to undergo any alteration without the occurrence of a corresponding change in any other region with which the vaso-motor fibrillæ of a given ganglion connect it.

Tobacco and large doses of quinine have the power of diminishing the vascular innervation which regulates the calibre of the blood-vessels, and thus regulates the flow of blood. The bromide preparations, and especially the acidum hydrobromicum, have the power of increasing this vascular innervation, reducing the calibre of the vessels and diminishing the flow of blood. From the action of these two agents on the vaso-motor ganglionic system Woakes explains the specific effect of quinine, namely, tinnitus aurium, and the antagonistic effect of hydrobromic acid. He narrates several cases where the internal administration of hydrobromic acid has produced favorable results in subjective noises and vertigo.

Subjective Noises from reduced Vascular Tension. — In his work on the Diseases of Modern Life, Richardson calls attention, among the functional diseases from the abuse of alcohol, to subjective noises in the ears as one of the symptoms often present with alcoholic dyspepsia, muscæ volitantes, vascular changes in the skin, etc. These noises, appearing as ringing or buzzing sounds in the head, sometimes are heard suddenly and for short intervals, sometimes continue for a long time. They are caused, he says, by reduced vascular tension, especially of the internal carotid artery, which passes for nearly an inch through the carotid canal of the petrous bone, in very close relation with all the structures of the ear, but more particularly with the tympanum, from which it is separated merely by a remarkably thin osseous wall.

The tension of the arterial walls being relaxed the artery is distended by the blood, its walls lie in close contact with the bony walls of the carotid canal, and the vibration of the blood is thus communicated to the bone and thence to the ear, the amount of vibration heard in the ear varying with the inconstant tension of the arterial walls. Richardson states that he has known such complete and prolonged relaxation of the artery that for many months together one continuous murmur, compared to the sound of a torrent of water, or the grinding of a mill, or the whistle of a steam-engine, has been a subjective symptom of the most distressing character.

In the same work, in speaking of nervous diseases from the use of tobacco, Richardson says that he entertains no doubt that there exists a functional derangement of hearing similar to and often coincident with the functional disturbance of the eye from the same cause.

He says (page 313): "The specific symptoms affecting the hearing are at first those of confusion, with an inability to appreciate distinctly sounds that are either very soft or unusually loud. This inability gives rise to restlessness and uneasiness on the part of the listener, who often asks questions with respect to articulate sounds which by others present are perfectly and distinctly heard. After a short period another symptom appears, namely, a sudden sharp ringing in the ears. This symptom will occur not necessarily during smoking, but at intervals afterwards. Sometimes, if attention be carefully paid to the subject, it may be discovered that some external noise, very slight in character, — such as the ringing of a distant bell, or the whistling of the wind through a chink, or some far-off musical murmur, — has produced the sound that is heard with so much exalted intensity. At other times the symptom comes on apparently without any provocation; the man is reading, walking, eating, or is engaged in some amusement, when suddenly there darts through one or the other ear a sharp, shrill, drilling ring, which always seems to come from without, and lasts often for two or three minutes at a time. No pain attends this phenomenon; that is to say, no actual pain, although the annoyance is extremely great. Strangely, too, the ear is not deaf during the time, for if a watch be placed to it the ticking is very distinctly heard; still more curiously, both ears are scarcely ever affected at one and the same moment. If the symptom be very much prolonged it may be attended with giddiness and nausea, but in the majority of cases after running through three stages (a commencing, an intensified, and a declining stage) it abruptly terminates."

Exostoses of Meatus. — Cassels,[1] in summing up his experience of exostoses of the meatus, gives the following account of the process by which they are formed in the ear. First, however, he separates distinctly exostoses or circumscribed bony growths in the meatus from hyperostoses or hyperplasia of the walls of the meatus. The exostoses, he says, are different from the hyperostoses in their origin, situation, and shape; they are benign, are always situated on the posterior wall of the meatus, and are found only in the inner half of the passage, that is, in the osseous meatus. They are pedunculated, and originate in the periosteum of the mastoid close to the meatus. They begin with a subperiosteal abscess over the mastoid, which enters the meatus either at the point where the cartilaginous joins the osseous portion of the passage, or else they rupture through the cartilaginous meatus. This abscess discharges for some time; finally, vascular granulations spring up on the edges of the opening, the cells of which are gradually converted into bone cells, and thus an osseous tumor is formed, the size and shape of which depends on the size and shape of the previous granulations. After complete ossification has taken place there is no increase in the size of the tumor.

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[1] British Medical Journal, December 15, 1877.

The treatment should consist, in the earlier stages of the disease, in a free opening into the abscess, and removal of any granulations which have developed; after the exostosis has once formed it can be excised by means of a small écraseur carrying a fine steel wire, or, if the meatus has become filled with the tumor, by electrolysis, which has been proved to be effectual.

These views of Cassels on the ætiology and treatment of exostoses are confirmed by Lennox Brown[1] and by Field.[2]

The Treatment of Otorrhœa. — Gruber[3] describes several new methods of making applications to the inflamed surfaces, the sources of the discharge, which are eminently practical, and in his hands have proved extremely useful.

In narrowing of the meatus, produced by the continual irritation of the passage from pus arising from the deeper parts, he has found pledgets of charpie or bougies of laminaria digitata, previously smeared with simple ointment, extremely useful in enlarging the canal by pressure, and he states that often, after restoring the natural calibre of the canal, douching with warm water has been sufficient to allay the deeper inflammation when uncomplicated.

In otorrhœa arising from an inflamed drum membrane he applies an artificial membrane of linen to the inflamed surface, covering the linen with a salve composed of zinc oxide 0.20 and unguentum emolliente 10.0, or of red precipitate of mercury 0.1 and unguentum emolliente 10.0. The same treatment is extremely satisfactory in affections of the middle ear with perforation of the drum membrane, the artificial covering protecting the parts from external influences.

In inflammations of the tympanum with destruction of the drum membrane, accompanied by exudation and a swollen tympanic mucous membrane, medicated gelatine globules are a convenient and effectual method of making astringent applications which it is desired should remain and act for a long time. These can be prepared with sulphate of zinc, tannic acid, borax, carbolic acid, or nitrate of silver in the proportion of from 1.–10. in 100. After thorough cleansing and drying of the ear the globule containing the desired medicament is passed into the tympanum, and there left slowly to dissolve, the meatus being closed by cotton. If the affection of the ear is painful, similar preparations of aqueous extract of opium or of morphine can be used in the same way.

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[1] British Medical Journal, December 22, 1877.

[2] British Medical Journal, February 2, 1878.

[3] Allgemeine Wiener med. Zeitung, Nos. 1 and 2, 1878.

Fibrinous Exudation. — Three cases of fibrinous exudation on the drum membrane and meatus are described by Bezold,[1] where the membranes on removal showed perfect casts of the parts from which they were taken. They occurred with moderately severe subjective and objective symptoms of local inflammation in the ear only. In one case perforations in both drum membranes had taken place before it came under observation, but these healed readily under treatment after removal of the exudation. All of the pseudomembranes, when examined under the microscope, showed large collections of micrococci; they were all easily removed, and the surface beneath them showed no ulceration or cicatrization. Bezold considers the disease to have been a croupous inflammation of the drum-membrane and osseous meatus, but differing from the otitis diphtheritica which has been described.

Why it should be called a distinctly croupous inflammation when so completely localized as it was in these cases it is difficult to understand, especially when it is remembered that the mucous membrane of the tympanum in many of its pathological phases very closely resembles the serous membranes; and as in pleurisy we may have an exudation which varies in the amount of fibrin and in the coagulability of that substance, so in the tympanum, as will be shown in another place, we may have an exudation in exceptional cases so rich in fibrin that there is a firm coagulum formed.

Primary Acute Inflammation of the Labyrinth. — Although this disease was described several years ago by Voltolini from his clinical observation, and from similar observations has been accepted by others as a by no means infrequent disease, still its recognition anatomically has occurred only recently. Schwartze,[2] in the summer of 1877, had an opportunity of dissecting a case which, although it lacks some of the elements for undoubtedly proving the existence of such a disease, still goes far towards establishing it.

A woman aged thirty, the subject of previous constitutional syphilis, complained for some weeks of headache on the right side, then of pain in the right ear, dizziness, staggering gait, violent subjective noises, and frequent vomiting for seventeen days. Objectively there was hyperæmia of the right drum membrane, and on account of the continuous pain paracentesis was performed, without, however, evacuating any secretion. For a few days there was some improvement, followed by increased pain in the head, a rapid rise in the temperature to 40.5° C., and the usual symptoms for three days of acute purulent meningitis, from which she died.

The autopsy showed diffuse purulent meningitis of the base and convexity; a purulent deposit near the Gasserian ganglion between the dura mater and the temporal bone; no caries of the temporal bone; no purulent deposit on the nerve trunks in the porus acusticus internus. The drum membrane was perfect, the puncture having healed; the tympanic mucous membrane was a little thickened; the tympanum was free from pus and of normal appearance. The labyrinthine structures — cochlea, vestibule, and semicircular canals — contained a sero-purulent fluid of milky consistency, which under the microscope showed nothing but degenerated pus cells. The vessels of the semicircular canals were tensely filled and tortuous; those of the ampullæ showed the same conditions in a more marked degree; and in certain spots small extravasations were seen. The utriculus and sacculus were much swollen and infiltrated by blood and pus. The connection of the labyrinthine suppuration with the disease within the cranium could not be recognized. All the other organs of the body were free from changes which could have any bearing on the fatal disease; no pathological changes characteristic of syphilis could be found.

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[1] Virchow's Archiv, vol. lxx. 3, 1877.

[2] Archiv für Ohrenheilkunde, xiii. 1.

It was unfortunate in this case that the course of the inflammation from the labyrinth to the brain could not be found, but still all the earlier symptoms pointed to the ear as the primary disease: first, pressure and pain in the ear, loss of hearing, and subjective noises; then, dizziness and staggering gait, these symptoms continuing for seventeen days without any decided head symptoms; finally, the well-marked symptoms of a meningitis which was fatal in three days. The dissection showed that the labyrinth was the only part of the ear diseased, the hyperæmia of the tympanum being merely secondary to the labyrinthine trouble. The facts, clinical and anatomical, are these: symptoms referable to the ear, generally accepted as characteristic of inflammation of the labyrinth, and unaccompanied by any others referable to the brain for more than two weeks; indications of brain disease well marked in their onset and entirely different from the previous ear symptoms; a condition of the ear and of the brain perfectly consistent with the clinical facts.

Fibro-Sarcoma of the Inner Ear. — To the few well-authenticated cases of malignant disease of the ear Burchardt-Merian [1] contributes one of fibro-sarcoma of the inner ear occurring in a man sixty-six years old, who had a chronic otorrhœa on the right side, the result of typhus fever. One year after the commencement of the otorrhœa he began to suffer from very severe and continuous pain in the ear, for the relief of which he first applied for treatment. Examination showed the meatus much contracted in calibre from a firm growth from its upper wall; beyond this growth were a few small granulations; the membrana tympani was destroyed except in its upper part, the membrana Shrapneli, and there was limited caries of the promontory; the Eustachian tube was fairly permeable; the hearing on this side was totally destroyed, the tuning-fork on the head being heard entirely in the good ear; discharge from the ear was moderate in quantity. The chief subjective symptom was intense continuous pain, which resisted all treatment, — leeches, ice, chloral, croton-chloral, quinine, morphine, and arsenic; there was also a slight increase in temperature. The mastoid finally became inflamed, Wilde's incision was made, and also an attempt to open the mastoid cells, but this failed, on account of sclerosis of the bone. In short, the same symptoms continued for eleven months without any new developments, and the patient was about to be discharged from the hospital, under the impression that he was greatly exaggerating his sufferings, when croupous pneumonia set in and resulted in death.

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[1] Archiv für Ohrenheilkunde, xiii. 1.

The autopsy showed a fibro-sarcoma arising from the dura mater just above the inferior petrosal sinus: this extended into the aquæductus vestibulæ to near the floor of the meatus internus, where it divided into two branches, one of which passed to the vestibule, which was filled with a firm, yellowish-white tumor the size of a bean, the cavity of the vestibule being enlarged by absorption of bone; the other branch of the tumor extended to the coverings of the internal carotid artery, with which it was firmly adherent. The aquæductus vestibulæ was much enlarged by separation of bony scales from its walls, produced probably by pressure; the cavity of the vestibule was similarly enlarged, and showed many osteophytes. The superior petrosal sinus was obliterated by an old adherent thrombus, which had become organized into connective tissue. The wall of the promontory was perforated in two spots by carious fistulæ. The facial nerve showed no pathological changes. The semicircular canals were apparently involved in the vestibular growth. The mastoid cells were entirely obliterated by hyperostosis, and the antrum mastoideum was not larger than a pea.

PROCEEDINGS OF THE AMERICAN NEUROLOGICAL ASSOCIATION.

[SPECIAL REPORT FOR THE BOSTON MEDICAL AND SURGICAL JOURNAL.]

THE annual session of the American Neurological Association commenced Wednesday afternoon, June 19th, at the College of Physicians and Surgeons, New York.

Both the president, Dr. J. S. Jewell, and the first vice-president, Dr. F. T. Miles, being unable to attend, the chair was occupied by the second vice-president, Dr. S. W. Webber.

The minutes of the last meeting having been printed and already placed in the hands of the members, their reading was dispensed with.

The first business in order was the report of the committee on prize essay, which was read by the secretary of the association, Dr. E. C. Seguin, of New

York. Last year Dr. Wm. A. Hammond offered a prize of two hundred and fifty dollars for the best essay on the action of strychnia. The report stated that two papers had been handed in, and that the committee had decided in favor of the one bearing the signature "Nux Vomica." It was regarded as a valuable contribution to our knowledge of this subject, being of marked ability and giving evidence of a great deal of original investigation. The other essay submitted, however, was also of great value. The envelope bearing the signature "Nux Vomica" was found to contain the name of Dr. Edward C. Spitzka, of New York.

The secretary then read two or three amendments to the constitution and by-laws, which had been recommended by the council, among them being one which makes the third Wednesday in June the regular time for the meetings of the association. The council's action had been confirmed by the written vote of the requisite number of members.

Afterwards the secretary read a communication from the president, Dr. Jewell, expressing his great regret at not being able to be present, and explaining that his absence was due to illness in his family. In it he also proposed a prize of two hundred dollars to be awarded next year for the best original researches into the physiology of the nerves of the ovaries and uterus. In connection with this matter Dr. Hammond announced that he would offer the same prize next year that he had this (two hundred and fifty dollars), although he had not as yet fully decided upon a subject for the competing essays.

The resignation of Dr. Walter Hay, of Dubuque, Iowa, was read and accepted, after which the chair appointed a committee for the purpose of nominating officers for the association.

Dr. Hammond proposed the name of Dr. Frederick Bakeman, of Norwich, England, for honorary membership.

The annual report of the treasurer, Dr. Seguin, showing that the association was indebted to him to the amount of eighty-eight dollars, was read and referred to an auditing committee, and then a report from the council in reference to the publication and disposal of the transactions of the association was made.

The reading of papers being now in order, Dr. Spitzka, of New York, presented one on The Olivary Bodies in Man and in the Chimpanzee and Lower Mammalia. A short time ago Dr. Spitzka had the opportunity of making a careful autopsy upon a chimpanzee which died at the New York Aquarium.

Dr. Putnam, of Boston, reported a case of Probable Hæmorrhage into the Cervical Enlargement of the Cord. The diagnosis of probable hæmorrhage was made principally from the suddenness with which the symptoms noted in the case came on, and the entire cervical enlargement seemed to be affected. No opportunity for a post-mortem examination had as yet been afforded, as the patient was still alive. The case was discussed by Drs. Beard and Seguin, and the latter thought it doubtful whether there had been any hæmorrhage. He reminded the reader of the paper that in infantile paralysis the affection frequently came on with great suddenness, and yet there was but one case on record in which hæmorrhage into the cord had been proved by autopsy. In reply, Dr. Putnam stated that he was by no means positive of there having been hæmorrhage in the case, and that he was quite willing to concede that the trouble might perhaps depend upon inflammatory action.

Dr. Beard, of New York, gave an abstract of a paper he had prepared in reference to Electrical Transmission from one Side of the Body to the Other. In the paper on this subject presented to the association last year by Dr. S. Weir Mitchell, of Philadelphia, the latter took the ground that the transmission was due to induction, the galvanic current making an induced current. Dr. Beard, however, contended that the true explanation was that it was due simply to the diffusion of a very moderate quantity of galvanic current.

Dr. Spitzka then presented a case, after which the association adjourned.

At the evening session Dr. L. C. Gray, of Brooklyn, recommended for active membership by the council, was unanimously elected, after which Dr. Webber, of Boston, read a paper on Suggestions as to the Nomenclature of Inflammatory Affections of the Spinal Cord. After pointing out the lack of scientific exactness in the terms now ordinarily employed, and relating several interesting cases by way of illustration, he recommended that there should be a more general use of the expressions acute interstitial myelitis, acute parenchymatous myelitis, chronic interstitial myelitis (instead of progressive locomotor ataxia), and chronic parenchymatous myelitis (instead of sclerosis in patches).

Dr. Rockwell, of New York, read the history of A Case of Complete Recovery from Blindness resulting from Brain Disease. In his introductory remarks Dr. Rockwell mentioned that there might be almost total destruction of one entire hemisphere without interfering with either the sense of sight or of hearing. The former was more apt to receive injury than the latter, but interference with either was sufficiently rare in lesions of the brain. The more common causes of loss of vision were believed to be injury to the peduncles, thrombosis prolonged into the ophthalmic artery, and compression upon the optic tract, their importance ranking in the order named. The case referred to had occurred some time ago, but had never been reported. It was seen in consultation two months after the patient had had an epileptiform seizure followed by incomplete paralysis of one side of the body and total blindness. There was never complete recovery from the paralysis, but in the improvement which occurred in it the reverse of the usual order of events was observed, the regaining of power in the upper extremity preceding that in the lower one. The employment of the induced current was recommended, and no sooner was it employed than the patient instantly regained his sight. Dr. Rockwell regarded it as altogether probable that the power of vision would have been restored spontaneously, but thought the reflex stimulation of the electrical current had no doubt hastened its restoration. The explanation of the blindness, he believed, would have to be sought for in the reflex influence produced by a cerebral lesion in the vicinity of the tubercular quadrigemina. Several cases similar to this one were now on record, but it was certainly very rare for the blindness to continue as long as it had done here in instances in which there was recovery from it. In one case referred to by Dr. Bastian, in which it lasted for six weeks, that authority spoke of this as an exceptionally long period.

Dr. Seguin, of New York, read a paper entitled, A Clinical and Therapeutical Contribution to our Knowledge of Cervical Paraplegia. Its object was to show that in some cases, at least, the affection could not only be checked, but positively cured. Three cases were cited, the first being that of an army surgeon, which came under observation about five years ago. The primary symptom was palsy of the left hand coming on very suddenly, and both hands afterwards became stiff and numb. Three months from the commencement of the trouble there were neuralgic pains, and the thensile element of the left hand began to waste. Later there was atrophy of the right hand also, and the patient found great difficulty in writing. This seemed to him to be due to a lack of coördinating power, but such was not really the case. There was also marked anæsthesia in the ulnar distribution of the left hand. Following these symptoms there occurred a sensation of constriction about the chest and some numbness in the upper part of the trunk. In addition, an unsteadiness in gait was noticed, and the patient, who had formerly been an unusually good pedestrian, could not now walk half a mile without considerable fatigue. It might be thought by some that this was a case of progressive muscular atrophy, but Dr. Seguin rejected this hypothesis, and his reasons for doing so were founded on such characteristics of the case as the following: the paralytic seizure, the prevalence of anæsthesia, and the want of symmetry in the wasting of the muscles.

By way of local treatment, thorough galvanization was resorted to, but no real progress was ever made in relieving the atrophy of the hands. The happiest results, however, followed the internal treatment employed, and the myelitis became completely arrested. Among the agents used were nitrate of silver, cod-liver oil, and zinc. The patient was now perfectly well, except for the condition of the hands, of which Dr. Seguin exhibited plaster casts. He doubted whether there had at any time been hæmorrhage in the cord in this case.

The second case was one of central myelitis involving the upper part of the cervical enlargement, and characterized by tactile anæsthesia and marked paresis of the hands and arms, with muscular atrophy and numbness. The patient was a female who had had a number of miscarriages, and there were also other reasons to suspect that the trouble was probably of syphilitic origin. The treatment consisted of mercurial inunction and the internal use of the biniodide of mercury. The patient also took two drachms of iodide of potassium a day, and at night Squibb's fluid extract of ergot, at first one teaspoonful, and afterwards two teaspoonfuls. In addition, galvanism was faithfully employed, and the actual cautery was applied every second day. One very important part of the treatment, on which great stress was laid, was that perfect rest for the hands and arms was insisted on. Under this course the patient made an excellent recovery, and the wasted muscles were completely restored.

The third case was also one of atrophic paralysis, and the symptoms were of such a character as to denote a very grave lesion in the cervical enlargement. This was probably extensive myelitis, with the formation of an internal cavity, and descending degeneration resulting. This case, which was that of a young girl, had only recently come under observation, but there seemed little to hope for in the way of treatment.

As to the pathology of these cases Dr. Seguin thought that there could be no doubt about there being inflammatory action in the second and third; and even if there had been hæmorrhage primarily in the first case, that secondary inflammation had resulted. As regards the therapeutical results, he admitted that the successful termination in the second case might possibly be due to the fact that it was of syphilitic origin, but at the same time he felt convinced that paraplegia had been averted in the first case by the treatment employed, since the symptoms had previously showed a decided tendency towards general paralysis. The paper was discussed by Drs. Putnam, Spitzka, Shaw, and others.

Dr. Beard exhibited a simple contrivance for the use of those suffering from writer's cramp, which consisted of two metallic bands attached to the penholder, one of them passing around the index finger, near its base, and the other around the middle finger, near its distal extremity. With the aid of this and the constant use of electricity a book-keeper, whose thumb was so affected that he could not write his own name, was now enabled to write for ten hours a day with facility.

Dr. Putnam then exhibited an apparatus for the relief of "wrist-drop" in lead paralysis, which he said was a modification of Dr. Van Bibber's, and founded on the principle of Mr. Barwell's artificial muscle, now so successfully employed in orthopædic surgery. It consisted of a rounded piece of tin, six inches or more in length, which was attached to the arm by means of strips of adhesive plaster and a roller-bandage, and from the upper extremity of which an elastic band passed to the back of the hand, where it was secured by means of a buckle to a strong glove worn upon the latter. In Dr. Putnam's hands it had proved of greater service than any apparatus which he had ever seen employed, and it had the great advantage of being simple in construction and cheap in cost.

Second day, Thursday, June 20th. When the association met at two P. M. the committee on nominations reported the following list of names for officers: president, Dr. F. T. Miles, of Baltimore; vice-president, Dr. S. W. Webber, of Boston; secretary and treasurer, Dr. E. C. Seguin, of New York; additional members of the council, Drs. F. P. Kinnicutt and J. J. Mason, of New York. Voting by ballot was dispensed with, and the above gentlemen were elected *viva voce*.

The scientific proceedings were then resumed, and Dr. N. B. Emerson, of New York, read the report of A Case of Probable Aneurismal Tumors of the Brain, exhibiting specimens, both gross and microscopical, in connection with it.

Dr. Spitzka gave a Demonstration of the Brain of the Menobranchus.

Dr. Webber read a paper on Syphilitic Disease of the Cord, with a case and specimens.

Dr. Beard read a paper on Experiments with Living Human Beings. He claimed that this matter ought to be reduced to a perfect science, without any room being left for doubt or mere opinion. There were, however, six principal sources of error, which he enumerated as follows: —

(1.) The phenomena of involuntary life in both the experimenter and the subject of the experimentation.

(2.) Unconscious deception on the part of the subject of experiment. It is this which renders observations in regard to the action of new remedies so frequently worthless.

Now, in order to guard against these two sources of error, two things are necessary: first, the experimenter should have a good general knowledge of the phenomena of involuntary life, and especially of those of trance; and, second, the subject must always be deceived in the experiment made upon him. The latter is to be accomplished by the experimenter in three ways, namely: —

(*a.*) By doing something when pretending to be doing nothing.

(*b.*) By doing nothing when pretending to be doing something.

(*c.*) By doing something different from that which the subject supposes is being done.

In a case of importance it is often desirable to employ all three of these methods.

Dr. Beard was of the opinion that Charcot and many other observers of the very highest distinction had failed in both of the above points.

(3.) The third source of error was intentional deception on the part of the subject of experiment. For instance, a physician had lately endeavored to convince him that a certain lady of his acquaintance was able to read questions inclosed within sealed envelopes by simply placing the latter to her forehead. In reply he contended that such a thing was thoroughly unscientific, and that he knew inductively that it was only a trick. The sequel showed that for years this lady had willfully deceived her husband and her most intimate friends.

(4.) Unintentional collusion on the part of the third parties, such as audiences or witnesses. In his exposures of the so-called "mind reading," he had found it absolutely necessary to exclude all witnesses from the room, or else to insist that they should remain perfectly motionless as well as silent.

(5.) Intentional collusion on the part of others, such as the assistants employed by Houdin and Heller in their tricks of magic.

(6,) Chance and coincidence. The last was a source of error very frequently overlooked.

In observations in regard to the action of new remedies it was generally supposed that all sources of error were eliminated, on account of the immense number of experiments frequently made; but such was not the case, and no experiments were so injurious to science as those which had the air of the greatest precision, but were in reality altogether worthless.

Dr. Beard's paper was discussed by Drs. Mason, Kinnicutt, Putnam, and Seguin. The last named said he considered it a very interesting and valuable contribution, which would undoubtedly assist us very much in our blind, groping way of testing medicines. He referred principally to our clinical methods, he said, as observations made in the laboratory were usually more accurate. Unfortunately, there did not seem to be much prospect of getting rid of one of the most prominent sources of error, namely, "expectant attention," since in private practice patients were constantly demanding more and more to know what the physician was giving them, while in hospitals the terms of service of the visiting staff were usually so short that it was next to impossible to carry out any prolonged series of observations in them. Dispensary practice was still more unsatisfactory in this respect, on account of the irregular attendance of the patients, the neglect to follow out the physician's directions, and the liability to lose sight of cases entirely just in the midst of one's experiments. In conclusion, he hoped that Dr. Beard would farther develop this very important subject.

Dr. Seguin next read the report of A Case of Amyotrophic Lateral Sclerosis, accompanying it with specimens and drawings. It was characterized by atrophic paralysis, with marked contraction, involving both the upper and lower extremities, and also by slight paresis of the mouth. Death occurred five years ago, from pneumonia, but the microscopical examinations had only recently been made. The specimens, however, were in an excellent state of preservation. The pathological anatomy of this form of sclerosis, Dr. Seguin said, was well known up to a certain point, but it was as yet undetermined what became of the sclerosis after passing beyond the decussation of the pyramids. A second point of dispute among authorities was as to the nature of the trouble, and a third as to its exact location. In regard to the last point, he believed with Flechsig, that it crossed the pyramidal fasciculus, and was not situated in the antero-lateral columns, as claimed by Charcot. In regard to its nature, on the other hand, he agreed with Charcot, believing that it was a truly inflammatory process, and not a degeneration, as claimed by Professor Flechsig. As to the first point mentioned, he was unable to throw any light on the matter, since, unfortunately, all those specimens from the case which might have been of service in clearing it up had been lost.

At the evening session Dr. Gray, of Brooklyn, read a paper on Cerebral Thermometry, which was discussed by a number of members, and then Dr. Kinnicutt reported a Case of Generalized Athetosis. It occurred in a child, and the head was affected as well as the hands, the facial and cervical muscles being implicated. There was also slight incoördination of the legs. Intelligence was poor, and the speech was morbidly affected. Eight similar cases had been recorded, seven by Clay Shaw in the St. Bartholomew Hospital Reports, and the eighth in Charcot's journal. Charcot had always claimed that hemiathetosis was found only as a result of cerebral hemiplegia, and therefore it was necessary to distinguish cases like the one under consideration from hemiathetosis, as being of an altogether different character. The characteristics of generalized athetosis are as follows: —

(1.) It is primary, and either is congenital or else originates very early in life.

(2.) It is bilateral, and always affects the head and the cervical muscles as well as the hands.

(3.) There is an absence of all paralysis and sensory disturbance.

(4.) There is a more decided tendency to diminished athetoid motion during repose.

(5.) It is accompanied by a greater or less degree of imbecility.

The pathology was only conjectural, as there had as yet been no autopsy reported.

Dr. Allan McLane Hamilton, of New York, stated that he had hitherto always been skeptical as to the existence of athetosis as a distinct affection, but that he had recently met with a case which had thoroughly convinced him of his error. The patient was a boy thirteen years old, and the athetosis had lasted six years. It affected both the hand and foot on the same side, and the peculiarity of the case was that it seemed to be primary. The intelligence of the lad was perfect.

Dr. Kinnicutt mentioned that an analysis of twenty-seven cases of hemiathetosis had lately been published, and in all but four there had been preceding hemiplegia. Two of the four exceptions were Dr. Hammond's cases.

Dr. Webber believed that a great many of the cases of athetosis were congenital, and related one of this kind in which the patient, now twenty-one years of age, had a constant motion of the left hand. He knew of thirty-three cases which had been reported, and stated that the left side of the body was affected in them as often as the right. In a large proportion of them (including Shaw's cases) the disease began in infancy. In two out of three autopsies which had been recorded there was found hæmorrhage into the corpus striatum. In both of these cases it was peculiar that the athetosis had lasted but a short time (only a few days), and had disappeared before death. It would seem therefore to have been due here to the irritation of the clot. In the third case a tumor was found at the autopsy. In all three cases the lesion was located about the denticular nucleus, towards its posterior end, and the internal capsule of the corpus striatum must undoubtedly have been pressed upon to a greater or less extent. Charcot had reported three autopsies where the lesion involved the corpus striatum and optic thalamus.

Dr. Emerson inquired what was the relation of athetosis to chorea, and Dr. Webber replied that he did not believe that it had any. He thought that the term post-hemiplegic chorea was a misnomer, because the motions occurring after cerebral hæmorrhage were not at all like those seen in the disease which we call chorea. Athetosis resembled what was known as post-hemiplegic chorea much more closely than it did chorea proper.

The evening's session was concluded by a narration of cases by Dr. Gibney, of New York.

Third day, Friday, June 21st. But one session was held on the final day. The first paper read was by Dr. Putman, and was entitled Observations on Intra-Ocular Circulation. It was discussed by Drs. Seguin, Shaw, and others.

After the narration of some cases by Dr. Beard, the last paper was read by Dr. Schmidt, on The Structure of the Ganglionic Bodies of the Cerebro-Spinal Axis, and then the association adjourned. The attendance was hardly as large, nor were the proceedings perhaps of quite as much interest. as at some of its former meetings.

STONE'S CASES, MEDICAL AND SURGICAL.[1]

A PERUSAL of this book, which is made up of such cases as seemed to the author worthy of record, and which were taken from a journal of all the cases occurring in his own practice during the whole of his professional life, gives one a desire to know something about the writer himself.

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[1] *Clinical Cases, Medical and Surgical.* By JOHN O. STONE, A. M., M. D. Formerly Surgeon to Bellevue Hospital, etc. New York: G. P. Putnam's Sons. 1878.

Dr. John O. Stone, as we learn by the kindness of Prof. Austin Flint, Jr., was born in Salem, Mass., in 1813; graduated from the department of arts, Harvard University, in 1833; took his medical degree in the medical school of the same university in 1836. Dr. Walker, of Charlestown, whose surgical ability evidently made a strong impression upon the mind of Dr. Stone, was his preceptor. While a student he had under his care the patients in Charlestown State Prison. After receiving his medical degree he visited Europe for purposes of study. Returning to America he settled in New York. From 1847 to 1854 he was a surgeon to Bellevue Hospital; was especially active in the New York Medical Association; was appointed commissioner of the Metropolitan Board of Health, in which capacity he did the city good service. He died suddenly of heart disease during the summer of 1877. His most striking traits were self-reliance, directness, and absolute honesty, and if we may judge by the tone of his book Dr. Stone possessed a modest simplicity which is not common.

The book records cases of great variety, both medical and surgical, the earliest dating 1834, the latest 1876. As the reader passes from one decade to another he notes with great interest the introduction of clinical facilities. the stethoscope, thermometer, microscope, laryngoscope, ophthalmoscope, etc. One remarks, too, the gradual change in treatment, — the lessening frequency of venesection, so abundantly used in the earlier years of these records, the growing simplicity in therapeutics, the increase in the use of water and a richer diet. The details of a very interesting case of puerperal fever (date 1836) were copied "from the minutes of my friend and fellow-student, Mr. Morrill Wyman." In this case the patient was bled to the extent of sixty ounces in nine hours; a blister, covering the whole abdomen, was applied; castor-oil, Epsom salts, etc., were given "in a way that would be considered reprehensible at the present day." Strangely enough the patient recovered. We find here the remark, "Opium must be regarded as of established value, and following venesection may, in most instances, be conceived to be invaluable. . . . But I wish to protest against the idea that what is old is valueless because a novelty is in temporary ascendancy." In a case of croup "treated by probang and caustic," Dr. Stone perhaps anticipates Trousseau in saying, "When tracheotomy is necessary I believe it should be done early." This is a fair evidence of the good sense which is found everywhere in these reports.

In recording a fatal case of encysted kidney, which held two gallons of fluid, Dr. Stone says the kidney is in possession of the Boston Society for Medical Improvement.(date 1852).

When we reach the purely surgical section of the book, we find a lengthy chapter on Amputations and Compound Fractures, which is of great value inasmuch as it enters deeply into comparative statistics. In connection with a number of fatal cases we notice the interesting remark, "All of these patients took ether, and since Velpeau has discouraged the use of chloroform during the period of stupor we may well ask whether the anæsthetic had aught to do with the mortality." This is a very thoughtful paper, and it shows that while Dr. Stone was a bold surgeon he was nevertheless conservative, especially in the matter of amputations. Moreover, one can readily see that surgery was his specialty by predilection; yet every case, whether medical or surgical, bears evidence of his conscientiousness.

The book is very systematically arranged, and will be found pleasant reading. It seems that the manuscript was found, ready for the printer, among his papers, after Dr. Stone's death, and was therefore published just as he left it. If he had lived long enough, probably he would have revised certain portions. The volume is handsomely bound and printed, but shows most irritating carelessness in proof-reading. In two hundred and thirty pages there are at least fifty gross errors. Negligence of this nature in a posthumous work written by a careful and systematic man is an unkindness to his memory.

OUR MEDICAL SOCIETIES AND THE CHARACTER OF THEIR WORK.

We have endeavored to present to our readers this spring a comprehensive summary of the vast amount of work accomplished by our medical associations, which each year seems to find more numerous and active. The most prominent change which has taken place of late years is the multiplication of societies representing special branches of medicine, the most recent of which is the National Laryngological Association organized at Buffalo. The report of the Neurological Association which we give in the present number shows how vigorously these societies are to be maintained. The fine volume of the Gynæcological Society which has just appeared is evidence of the success of that body, although in its third year only. The meeting of the national association in Buffalo was encouraging to those who are concerned for its welfare, although there does not appear to have been any feature of marked interest. The attendance was quite large, however, and as a social gathering it may be considered a marked success. We have heard the customary allusions made to the attitude of Massachusetts to the association in view of a supposed insult offered to the state society some years ago. As those who are familiar with the facts of the case are well aware, the national body, with its imperfect machinery for handling such matters, took the only action it well could under the circumstances. The limited attendance of late years from this quarter of the country should rather be ascribed to our remote situation and the lack of sufficiently interesting work at the meetings to induce men to make a long journey to attend them. As their character improves we have no doubt the attendance will also.

Our state society never showed more vigor than it has the present year. The combination of the proceedings of the Medico-Legal Society with those of the state was a happy thought, and the hall of the Lowell Institute was never more crowded. The spectacle of a body of from six to eight hundred men gathered together at the annual dinner in the Music Hall is a striking one, particularly to visitors to the state meeting, to whom the scene is undoubtedly as novel as interesting.

We have one comment to make on the work of the society at this as at other meetings, and that is the absence of all debate upon the papers read.

A debate organized upon the principle of one lately conducted at the New York Journal Association, a report of which appeared in a recent number, would be a very valuable feature, and if properly arranged would bring out some of our prominent practitioners and greatly increase the interest in the literary portion of the meeting. It has been a growing habit of medical societies in Boston to avoid all discussion, and it is but too frequently the case that a valuable paper is received in dead silence, the members who should be leaders in debate preserving a sphinx-like attitude which discourages or awes the young portion of the fraternity. We hope to see next year a lively discussion participated in by several well-known men, and we respectfully submit the suggestion to the committee which has charge of these matters. We regret to see that the reports of the districts have not been forthcoming this year.

MEDICAL NOTES.

— A French correspondent of the London *Medical Record* is very severe upon French surgery. He says: "The first thing French surgeons have to learn is cleanliness in their own manipulations; cleanliness of their instruments and of the dressings. Then they have to teach the same lesson to their house-surgeons, whose neglect, dirt, and cruel habit of carrying infection from patient to patient are so ingrained that nothing short of a great effort can alter them. A complete reformation also is wanted in the dirty, slovenly ways of the good Sisters. Neglect of cleanliness, — that is the secret of the bad results of French surgery; and how bad they are in comparison with the rest of the world will never be known, for no reliable statistics are kept. A capital operation in some of the services here is little less than homicide. . . . It is the practice of consultants (of Paris) to charge very high fees for their consultation or operation, and hand over part, sometimes half, of it to the practitioner who calls the consultation. Foreign patients should be on their guard against a practice which puts them up to the highest bidder. . . . I believe such a custom is unknown anywhere else in the world, but I am assured by well-informed authority that it exists very largely in Paris, and has extended to very high quarters."

— Dr. Gallard, of La Pitié, in remarking on the effects of alcohol on the stomach, says: "No class of society is free from the vicious taint of alcoholism, and a large number of unexplained disorders are probably due to the pernicious habit of drinking, or an indulgence in what are called stimulants."

— According to the *Revue des deux Mondes* the ostrich hunters of South America extract the pepsine from the stomach of that bird, and sell it to dyspeptics for its weight in gold. This business was suggested by the almost incredible digestive powers of the ostrich.

— *L'Union médicale* announces the inauguration at Pavia of a statue to Alexander Volta.

— A telegram from San Stefano states that "fifty physicians and fifty-four assistant surgeons have died in the service of the army of the Danube; thirty-one physicians are on leave, and four hundred and seventy-four physicians and assistant surgeons are ill.

— It seems that Dr. Richardson, of London, has been experimenting with Professor Hughes, of Kentucky, now in England, and the discoverer of the microphone or sound magnifier, "but," says the *Lancet*, "up to this time, by means of the microphone, Dr. Richardson has not been able to hear the respiratory murmur and the cardiac sounds any more clearly than with the stethoscope. Certain difficulties are yet to be overcome. Through the microphone the smallest defects in clock or watch may be detected. If the same analysis of motion can be applied to the animal mechanism, Laennec himself will find a historical rival in Professor Hughes."

— "A sudden and inexplicable death" from the inhalation of methylene is recorded in the *Medical Press and Circular*. The victim was a retired officer, forty years of age, in apparent health.

— A New York correspondent of the *North Carolina Medical Journal* mentions a case in which Dr. Alan P. Smith, of Maryland, sounded for stone, and discovered two urethræ in one penis. He had found no stone, but on sounding through the second urethra did find it, and thus disclosed the fact that there were also two bladders. Lithotomy was performed, the patient micturated naturally during the whole period of convalescence through one of the urethræ. and finally recovered. The same writer also says that Sayre has given the *coup de grace* to those who dispute the claim of priority in the matter of the plaster-of-Paris dressing of the spine, by showing that suspension in the treatment of Pott's disease was in use more than two hundred years ago.

— The *Geneva Journal* (Swiss) states that several cases of lead-poisoning in infants lately occurring in Germany have been found to be due to the effect of the direct rays of the sun upon the oil-cloth tops of baby-carriages in which these children were kept when out-of-doors. The oil-cloth is of American make, and contains forty-two per cent. of metallic lead.

— For the first time in Holland a medical diploma has been recently given to a female who proposes to practice in Amsterdam.

— McKelway, of Philadelphia, gives this formula for making koumiss of cow's milk: Best unskimmed milk, one quart; yeast (brewer's or old baker's), gr. c.; cane sugar, gr. cc. Keep the mixture at 80° F. until fermentation is brisk, stirring frequently; then bottle, and secure corks with wire or stout twine. In twenty-four hours it is fit for use. Dr. Pepper recommends this preparation in a variety of bodily conditions. His paper will be found in the *Medical and Surgical Reporter* for June 1st.

— Dr. Favrier — *La France médicale* — says that compression of the epigastrium by a tourniquet will arrest the most obstinate and rebellious hiccough almost at once.

— A Newark, N. J., physician reports the "cure" of a patient who had suffered severely from aortic incompetency, with dilatation. Nitrite of amyl in five-drop doses every two hours for five days was the specific. The dose was gradually diminished, and then withdrawn.

— Dr. Thompson, of Goshen, N. Y., says that in a drug store of his town he saw a woman take thirty-seven grains of morphia at one dose without visible effects. The woman stated that it was her usual dose. She seemed to be in good health.

— The *Duboisia myopsorida,* from an Australian plant, has been recently advocated by M. Galezowski as a mydriatic, much superior to atropia. Its advantages are set forth in *La Mouvement médicale.*

— MM. Bochefontaine and Bourceret, reporting their experiments on the pericardium, assert: (1.) That the healthy pericardium is sensitive; this sensibility — more decided on the external than on the internal face — may be excited mechanically. (2.) That the inflamed pericardium exhibits strong sensibility on its external face and in its thickness. They believe that the exceptional pain in rheumatic pericarditis is thus explained, as it is ordinarily superficial. The experiments also make clear the reason of the intense pain in other forms of inflammation of the pericardium.

— Dr. Smith, in the *Pacific Medical and Surgical Journal,* reports the case of a young German mother, aged seventeen, who has a third mammary gland on the left side, a few inches below the normal gland. After the birth of her child this gland secreted as much milk as either of the other two.

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LETTER FROM LONDON.

Mr. Editor, — Perhaps the most energetic of the many medical societies of London is the Pathological Society, which holds its meetings twice a month from October until the end of May. The meetings are usually devoted to the exhibition and discussion of morbid pathological specimens of very various kinds; but each year a series of three or four evenings is devoted to the consideration of some one great question connected with pathology, which is chosen several months beforehand in order that the members may be able to direct their attention to this subject, and may come to the debate with supplies of new and well-organized facts bearing on it. In this way the pathology of tubercle, of cancer, of syphilis, and of contagion in general has been, within the last few years, thoroughly discussed; and though it cannot be said that all doubtful points have thereby been settled, yet the debates have served the purpose of bringing these points into prominence, and have set men thinking about matters which might otherwise have long remained dormant.

This year the subject chosen was the pathology of diseases of the blood-making organs, and especially of the morbid state which has passed under the various names of Hodgkin's disease, adénie, lymphoma, and lymphadenoma. The subject is one of peculiar interest, not only from the importance attaching to the ultimate pathology of the diseases of the blood-making organs, but from the fact that the study of these diseases has begun so recently that many fundamental facts in their history still remain unsettled. It was partly to elucidate these points, and partly to trace, if possible, the relation which the different diseases of the group bear to one another, that the subject was chosen for discussion this year in the Pathological Society.

According to the present classification the group of diseases of blood nutrition may be said to be composed as follows: (1) Splenic leucocythæmia; (2) leucocythæmia from disease of some organ or organs other than the spleen; (3) lymphadenoma; (4) pernicious anæmia. In the first three of these conditions the blood-making organs are at fault, but the last seems to be a failure of blood nutrition apart from any evident disease of the organs. Now, though the above classification has hitherto been accepted as a rough indication of the main types of disease, yet in reality these types become frequently intermingled in an endless variety of ways. So much so, indeed, is this the case that it makes it doubtful whether our classification is a truly scientific one, or whether it will not be possible to substitute for it one which shall be here in accordance with the true significance of the various morbid states.

The recent discussion was opened by Dr. Wilks, of Guy's Hospital, who briefly narrated the original cases of lymphatic gland disease observed by Hodgkin; but the speeches containing the greatest amount of new matter were those by Drs. Gowers, Greenfield, Turner, and Goodhart, who may be looked upon as the pathological representatives of the great schools of University College, St. Thomas's Hospital, London Hospital, and Guy's Hospital, respectively. The results they brought forward only helped, however, to show how almost impossible it is to make definite varieties of disease of the hæmatopoietic organs; that lymphatic gland disease is comparatively rare without concurrent splenic disease; and that in very many cases there is disease of lymphatic tissue in other parts of the body as well. Dr. Gowers presented a table of ninety-seven cases of so-called lymphadenoma gathered from various sources, in no less than seventy-seven of which the spleen was enlarged. Of these seventy-seven cases fifty-seven showed the typical infiltration characteristic of splenic leucocythæmia, and in the remaining twenty cases there was marked hypertrophy. In eight cases of lymphadenoma which had come under the observation of Dr. Greenfield there was only one in which the spleen was unaffected, and in five the typical infiltration was found in this organ. The statistics of Dr. Turner went further, and tended to show that in by far the larger number of cases the disease is not even confined to the spleen and glands, for in seven out of nine cases which had occurred in the London Hospital, and the particulars of which he gave, there were diffused lymphatic growths in many of the other viscera, as the kidney, liver, intestines, etc., whilst in the remaining two cases there had been no careful examination of the other organs. Regarding the presence of the symptom leucocythæmia, all the speakers agreed in stating that where the disease was most developed in the spleen this symptom was present in nearly all the cases; whereas if the disease were mainly seated in the lymphatic glands it was rarely observed, the blood presenting the appearance of well-marked anæmia only. Where both spleen and lymphatic glands were involved it was sometimes met with, and sometimes not; but the statistics did not show whether the presence of this symptom depended upon the existence of typical infiltration of the spleen or upon simple hypertrophy. The occurrence of leucocythæmia in disease of the lymphatic glands only, though evidently rare, has been placed beyond a doubt by the accounts given of this condition by Virchow, who has even described a noteworthy difference in the appearance of the leucocytes occurring in splenic disease as compared with those which are found in lymphatic gland disease.

The results brought forward in the discussion in the Pathological Society tend to show that we have hitherto been much too ready to draw sharp distinctions between conditions which run imperceptibly into one another, and which are probably only varieties of development of some one morbid tendency. Not only have we been drawing sharp lines of demarkation, but we have adopted a classification based upon two very different grounds; for we have made one series of diseases dependent for their points of distinction upon locality of lesion, and a second series dependent upon the presence or absence of a certain symptom. We talk of splenic disease and lymphatic disease, — a difference based upon locality of lesion; whilst lymphatic disease is subdivided into leukæmia lymphatica and anæmia lymphatica, according as there is marked increase in the relative number of white corpuscles on the one hand, or simple progressive anæmia on the other. In addition, we have myelogenic disease, that is leukæmia associated with disease of the bony marrow, and simple lymphoma of one or more organs, which do not come within any of the previous categories.

Now these subdivisions with their elaborate nomenclature, though perhaps of service for clinical purposes, are eminently unscientific, and most certainly stand in the way of a general and philosophic treatment of the subject. There is a natural tendency to erect every condition thus individualized into a separate entity sharply distinguished from all others, and in order to define these entities more clearly great stress is laid upon symptoms which are in reality mere accidental concomitants, the presence or absence of which is determined by slight modifications in the seat or in the character of the lesion; the result, that closely connected varieties of disease, all of which spring from one root-stock, have come to be regarded as almost or entirely independent of one another. We must endeavor to widen our field of vision to get a comprehensive grasp of the whole of the subject at once, and extend our investigations from the various branches to the common trunk from which they all spring. We must seek whether there be not some one cause to which all varieties of lymphatic disease can be traced. We may not be able to give a thorough explanation of the origin of this cause, nor of the way in which it acts, any more than we can say what is at the bottom of the rheumatic diathesis, or why, in acute rheumatism, the fibrous membranes are especially prone to attack; but we shall probably come to look upon all these diseases of the hæmatopoietic organs as the local expression of some constitutional tendency. In so far as this constitutional tendency shows itself in a slowly progressive morbid nutrition, it may be said to be analogous to cancer; but it differs from cancer in that it appears to attack only one kind of tissue, namely, the lymphatic. We shall thus add another to the long list of constitutional diseases having a variety of local developments, and by doing so we shall be more easily able to give their due significance to these local varieties. The French have been much more ready than we in England to look at the subject in this light, and they have invented the term "lymphogenic diathesis" to include all forms of the disease; but our tendency has been to specialize rather than to generalize; we have studied with the eyes of the clinician rather than with those of the scientific pathologist. To how great an extent this has been the case was evidenced in the late discussion, where Dr. Goodhart, who advocated our seeking points of contact between the several conditions he described, was rebuked for his temerity by no less an authority than Sir William Gull, who considered the "aim of pathology to be to individualize and differentiate, and not to generalize."

In conclusion, I would venture to inquire whether the presence or absence of leucocythæmia in disease of the lymphatic glands may not depend upon the relative amount of disease in the specific glandular tissue and in the fibrous reticulum of the gland. In some cases the glands were found converted into masses of fibrous tissue, and in others there was very marked increase in the gland pulp. Now, as it is this latter element which is believed to manufacture white blood corpuscles, in the former case we should have diminution in white blood corpuscles and the production of simple anæmia, whilst in the latter we should have increased formation of leucocytes. In the same way it would be easy to suggest reasons why this symptom should be so much more common in splenic than in lymphatic disease. I would, however, only offer these as indications for future investigation.

I have omitted the consideration of idiopathic pernicious anæmia because our clinical knowledge of this condition is still very imperfect, and nothing therefore can safely be hazarded as to its probable pathological analogies. Very little was said about it in the late discussion before the Pathological Society, and the feeling was rather in favor of separating it from the category of the lymphatic diseases.

LONDON, *May*, 1878.

SHORT COMMUNICATIONS.

THE ADMISSION OF WOMEN TO THE HARVARD MEDICAL SCHOOL.

MR. EDITOR, — If female students of medicine are unable elsewhere to acquire a good professional education, there would seem to be ground for the medical school of Harvard to open its doors to them. It is true that every student should have the opportunity of acquiring a thorough education. That the step suggested would have a deleterious effect on the school there can be little doubt. Coeducation of the sexes in medicine has, I think, always worked badly, except where the two sexes in medical classes have been united by a common feeling of martyrdom, or been moved by a common spirit of proselytism.

Such must be the experience always, for the arguments on the question of coeducation in general cannot apply to that in which the science of the human body is taught, at least with our present social structure.

There can be no more objection to the two sexes being educated together than to their association together in any other social relation *until* their studies and exercises touch subjects on which by common consent the proprieties demand silence. When this point is reached, for the success of the students — not for the safety of their morals — the sexes should study apart.

But it is said that physicians should meet each other on a basis of high ethics and science and forget sex. This is both true in principle and possible in practice. But students are not physicians, and time is required to develop the average young man who takes up the study of our profession to this basis. Some experience with students of both sexes has impressed the writer that the woman student has attained this state by the time her resolution is formed to become a doctor. But the man student, as a rule, requires time to acquire the professional feeling.

Ten years ago a trial was made of mixed classes in the Chicago Medical College. Women were admitted on the same terms as men, and several entered and attended one course of lectures. They attended all the exercises, including the clinics and dissections. They were very faithful and conscientious students, and seemed to find no difficulty in feeling that they were learners, instead of simply women in the presence of a concourse of men, whenever in the lectures a topic was reached that touched the sensibilities, or they entered the dissecting room, or a patient was presented at the clinic in a plight that would shock a mixed audience of lay people. Their brothers and some members of the faculty were less fortunate. Many of these pupils found difficulty in forgetting that they were men in the presence of ladies, and not learners only, and the annoyance and embarrassment were so great, and occasionally the rudeness on the part of some male students who forgot themselves became so pronounced, that at the end of the term the faculty gladly gave up the experiment.

As a consequence, a college was at once organized for the education of women exclusively, and has been in successful operation ever since. It is found that here women can acquire a better education than at either of the colleges for men, the curriculum being the same or higher, and there has been no dissatisfaction with this arrangement.

But the question is a difficult one to discuss, and one on which you are sure to be misunderstood if you oppose any demand of the woman movement. For the advocates of that movement seem unable to allow you to say that women are different from men without insisting that you mean that they are inferior.

To say that men and women should be educated in medicine separately is no disparagement to women students, nor is it opposition to the free and equal entry of women into the profession. It is simply deference to an almost universal feeling of the sexes toward each other, — a feeling with which from childhood up we are indoctrinated by the civilization of our time.

If Harvard is able to establish a woman's medical school that will give instruction of as high an order as the present school it would probably be a good thing for the institution, and the new school would take rank at once by the side of its elder brother as the first in the land. But to make a mixed school of the one you already have would add an additional load to the heavy one she is already carrying in the interest of better education and higher requirements. The woman's movement, essentially just and correct as it is, cannot afford to molest Harvard. It has most to gain by allowing the latter to work out the problem it has in hand.

CHICAGO, *June* 20, 1878.

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REMARKABLE CASE OF PARALYSIS, WITH SPONTANEOUS RELIEF.

BY O. R. BACHELER, M. D.,

Medical Missionary, Midnapore, India.

TÁRA KHÁN was a prisoner in the jail at Midnapore. He was a Mohammedan from Eastern Bengal, age about thirty, well formed and well nourished, condemned to seven years' imprisonment for robbery, six years of which term he had already served.

On July 1, 1876, he was admitted to the jail hospital for paralysis of the left side. I watched the case with a good deal of interest during the six months that he was under treatment, making, in connection with the attending surgeon, frequent and thorough examinations.

There was complete paralysis of both nerves of motion and sensation of the affected side, the line of demarkation quite distinct, the median line of trunk and head. There had been a case of feigned paralysis in the jail some months before, in consequence of which this case received special attention, with constant watching and the application of a variety of tests on the part of the hospital attendants.

From notes made at various times I see that the treatment was (1) blisters to the neck (2) galvanism once daily for a month, (3) a course of bromide of potassium with tartar emetic, (4) strychnine one sixteenth of a grain daily for fifteen days, etc. Diet, milk, one pint to a quart daily.

The patient remained much the same for four months, except that the appetite and strength were gradually failing. At the commencement of the fifth month he was in a moribund state for three days, quite unconscious and pulseless for several hours, from which he slowly rallied. From this date remedies were discontinued. His condition seemed utterly hopeless, while emaciation and general weakness increased daily. His position was invariably upon the back, except occasionally when his fellow prisoners would raise his head and shoulders upon pillows. He had not strength to change his position in the least.

On January 1, 1877, the queen was proclaimed Empress of India, and in honor of the event many well-behaved prisoners were released from the jail. Tára Khán, having but six months more to serve, and withal apparently near to death, was thought to be a fit subject for the queen's favor, and was accordingly released. Three men raised him upon his feet and helped him to walk from the hospital to the superintendent's office, about forty rods, where he sat waiting his turn. His dismission paper was made out and handed to him, when he immediately sprang to his feet and walked away. It was noticed that there was a dragging motion of the left leg, but not sufficient to impede his walking. As the released prisoners were required to leave the town immediately, this man disappeared with his fellows, and has not since been heard from.

I have been induced to report this case thus minutely in consequence of some remarks that appeared in your JOURNAL some months since touching the influence of certain religious emotions on the diseased nervous system. I think there are a sufficient number of well-authenticated cases on record to show conclusively that under the influence of a sudden shock produced by emotions of joy, sorrow, fear, or fright a paralyzed nerve or system of nerves may be restored to their normal condition. Whenever religion claims like results for its emotions it must be where these conditions are absent, and these conditions being absent the claims of religion are worthy at least of careful consideration.

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COMPARATIVE MORTALITY-RATES.

	Estimated Population, July 1, 1878.	Deaths during week ending June 22, 1878.	Annual Death-Rates per 1000 living.		
			For the Week.	For the Year 1877.	Mean for ten Years, '68-77.
New York.	1,093,171	469	22.31	23.42	28.71
Philadelphia.	876,118	309	18.34	18.80	21.54
Brooklyn.	549,438			21.51	25.50
Chicago.	460,000	107	12.09	17.83	22.39
Boston.	375,476	137	18.97	20.10	24.34
Providence.	100,000	18	9.36	18.81	19.20
Lowell.	55,798	15	13.98	19.09	22.50
Worcester.	54,937	14	13.26	14.07	22.30
Cambridge.	53,547	17	16.50	18.69	20.83
Fall River.	53,207	13	12.71	1.35	24.96
Lynn.	35,528			0.42	19.67
Springfield.	33,981	5	7.66	6.02	19.77
Salem.	27,140	7	13.41	0.38	21.15

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Gynæcological Society of Boston. — The next regular meeting of the society will be postponed to the second Thursday of July, the first Thursday being a public holiday.

Henry M. Field, M. D., *Secretary.*

Norfolk District Medical Society. — A regular meeting will be held in Kennedy Hall, room 5, on Tuesday, July 9th, at two o'clock. Papers, communications, etc.: —

(1.) Malignant Disease of the Uterus, Dr. C. E. Wing.
(2.) Medical Ethics and "Codes of Ethics," Dr. Henry A. Martin.

Lunch at four P. M.

A full attendance is earnestly desired for the consideration of the adoption of a new by-law.

Henry R. Stedman, *Secretary.*